

Notice of Allowability

Application No.

10/657,173

Examiner

Kanji Patel

Applicant(s)

HORITA, SATORU

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/27/07.
2. ☒ The allowed claim(s) is/are 2,3 and 6-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Response to Amendment

1. Applicant's amendment filed 4/27/07 has been entered and made of record.

By this amendment claims 1, and 4-5 are cancelled. Claims 11-17 are added new. Claims 2-3 and 6-17 are pending in the application.

In response to applicant's amendment to independent claims 9-10 by incorporating the allowable subject matter of claims 4 and 5 as set forth in last Office action mailed 12/29/06, the rejection of claims 1-3 and 6-10 under 35 USC 102(b) and 103(a) have been withdrawn.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Claims 2-3 and 6-17 (renumbered as 1-14) are allowed.

The present invention is directed to a filtering device and a filtering process. The closest prior art to Greggain (US 5,602,599) discloses a low pass filter comprising an image frame store 1 for receiving and storing an unfiltered input digital image, and a first resizing apparatus 3 for receiving and resizing the input digital signal to a smaller size. In the process of reducing the number of pixels and lines, the resizing apparatus 3 also removes spatial frequency from the input digital signal. The reduced size image from resizing apparatus 3 is then restored to the original size of the input digital signal by resizing apparatus 5 and then transmitted to out put frame store 7. Zheng (US 6,453,074 B1) discloses an image decimation of a high-resolution image so as to obtain a decimated low-resolution image. Image decimation includes adaptive pre-filtering in which a pixel-by-pixel determination is made of busyness in the neighborhood of a

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target pixel, and based on the determination of busyness a low-pass filter is selectively and adaptively applied prior to sub-sampling to obtain the decimated image. However, Greggain and Zheng fail to “decreasing the number of pixels forming the original image so as to generate a low-resolution image, the decreasing comprising dividing the original image into a plurality of areas which have a plurality of pixels and then choosing one pixel from the plurality of pixels of each of the areas, the chosen pixel being the pixel used to form the low-resolution image, so as to generate the low-resolution image” and “filtering pixel data of pixels forming the low-resolution image so as to transform the low-resolution image into a filtered image” This distinct features have been added to the independent claims 9 and 10 and render them allowable. Furthermore, Greggain and Zheng fail to teach or suggest, “decreasing the number of pixels forming the original image so as to generate a low-resolution image, the decreasing comprising dividing the original image into a plurality of areas which have a plurality of pixels, the average pixel data of each of the areas being data of each pixel forming the low-resolution image, so as to generate the low-resolution image” and “filtering pixel data of pixels forming the low-resolution image so as to transform the low-resolution image into a filtered image” This distinct features have been added to the independent claims 11 and 12 and render them allowable.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kanji Patel whose telephone number is (571) 272-7454. The examiner can normally be reached on Monday to Thursday from 8 a.m. to 6:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lillis Eileen can be reached on (571) 272-6928 The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kanji Patel
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5/12/07


KANJIBHAI PATEL
PRIMARY EXAMINER